

AMENDMENTS TO THE CLAIMS

Please amend claims 89, 91, 94 and 99 and add claims 114-128 as follows. The following listing of claims replaces all prior versions and listings of claims in the application.

1-49. (Cancelled)

50. (Previously Presented) The method of claim 92, wherein the cell is a plant protoplast.

51. (Previously Presented) The method of claim 50, wherein the SATAC comprises heterologous DNA that encodes a gene product.

52. (Previously Presented) The method of claim 51, wherein the SATAC is introduced by cell fusion, lipid-mediated transfection by a carrier system, microinjection, microcell fusion, electroporation, microprojectile bombardment, or direct DNA transfer.

53-72. (Cancelled)

73. (Previously Presented) The method of claim 50, wherein the SATAC is introduced by direct DNA transfer.

74. (Previously Presented) The method of claim 50, wherein the SATAC is introduced by cell fusion.

75. (Previously Presented) The method of claim 50, wherein the SATAC is introduced by lipid-mediated transfection by a carrier system.

76. (Previously Presented) The method of claim 50, wherein the SATAC is introduced by microinjection.

77. (Previously Presented) The method of claim 50, wherein the SATAC is introduced by microcell fusion.

78. (Previously Presented) The method of claim 50, wherein the SATAC is introduced by electroporation.

79. (Previously Presented) The method of claim 50, wherein the SATAC is introduced by microprojectile bombardment.

U.S.S.N. 09/724,726
HADLACZKY *et al.*
RESPONSE

80. (Previously Presented) The method of claim 51, wherein the SATAC is introduced by direct DNA transfer.

81. (Previously Presented) The method of claim 51, wherein the SATAC is introduced by cell fusion.

82. (Previously Presented) The method of claim 51, wherein the SATAC is introduced by lipid-mediated transfection by a carrier system.

83. (Previously Presented) The method of claim 51, wherein the SATAC is introduced by microinjection.

84. (Previously Presented) The method of claim 51, wherein the SATAC is introduced by microcell fusion.

85. (Previously Presented) The method of claim 51, wherein the SATAC is introduced by electroporation.

86. (Previously Presented) The method of claim 51, wherein the SATAC is introduced by microprojectile bombardment.

87. (Previously Presented) The method of claim 51, wherein the gene product confers disease resistance to the transgenic plant.

88. (Previously Presented) The method of claim 50, wherein the plant protoplast is selected from a monocot, a dicot and an algae.

89. (Currently Amended) The method of claim 88, wherein the plant protoplast is selected from tobacco, tomato, potato, petunia, wheat, rice, maize, ~~rice~~, rye, cotton, soybean, *Brassica napus* and lettuce.

90. (Previously Presented) The method of claim 51, wherein the plant protoplast is selected from a monocot, a dicot and an algae.

91. (Currently Amended) The method of claim 90, wherein the plant protoplast is selected from tobacco, tomato, potato, petunia, wheat, rice, maize, ~~rice~~, rye, cotton, soybean, *Brassica napus* and lettuce.

92. (Previously Presented) A method for producing a transgenic plant, comprising introducing a satellite artificial chromosome (SATAC) into a plant cell; and

U.S.S.N. 09/724,726
HADLACZKY *et al.*
RESPONSE

growing the plant cell under conditions to produce a transgenic plant.

93. (Previously Presented) The method of claim 92, wherein the plant cell is contained in a plant organ or embryoid.

94. (Currently Amended) The method of claim 92, wherein the plant protoplast is selected from tobacco, tomato, potato, petunia, wheat, rice, maize, rice, rye, cotton, soybean, *Brassica napus* and lettuce.

95. (Previously Presented) The method of claim 92, wherein the SATAC comprises heterologous DNA.

96. (Previously Presented) The method of claim 95, wherein the heterologous DNA encodes a gene product.

97. (Previously Presented) The method of claim 96, wherein the gene product confers disease resistance to the transgenic plant.

98. (Previously Presented) The method of claim 95, wherein the plant cell is selected from a monocot, a dicot and an algae.

99. (Currently Amended) The method of claim 95, wherein the plant cell is selected from tobacco, tomato, potato, petunia, wheat, rice, maize, rice, rye, cotton, soybean, *Brassica napus* and lettuce.

100. (Previously Presented) The method of claim 92, wherein the SATAC is introduced by direct DNA transfer.

101. (Previously Presented) The method of claim 92, wherein the SATAC is introduced by cell fusion.

102. (Previously Presented) The method of claim 92, wherein the SATAC is introduced by lipid-mediated transfection by a carrier system.

103. (Previously Presented) The method of claim 92, wherein the SATAC is introduced by microinjection.

104. (Previously Presented) The method of claim 92, wherein the SATAC is introduced by microcell fusion.

U.S.S.N. 09/724,726
HADLACZKY *et al.*
RESPONSE

105. (Previously Presented) The method of claim 92, wherein the SATAC is introduced by electroporation.

106. (Previously Presented) The method of claim 92, wherein the SATAC is introduced by microprojectile bombardment.

107. (Previously Presented) The method of claim 95, wherein the SATAC is introduced by direct DNA transfer.

108. (Previously Presented) The method of claim 95, wherein the SATAC is introduced by cell fusion.

109. (Previously Presented) The method of claim 95, wherein the SATAC is introduced by lipid-mediated transfection by a carrier system.

110. (Previously Presented) The method of claim 95, wherein the SATAC is introduced by microinjection.

111. (Previously Presented) The method of claim 95, wherein the SATAC is introduced by microcell fusion.

112. (Previously Presented) The method of claim 95, wherein the SATAC is introduced by electroporation.

113. (Previously Presented) The method of claim 95, wherein the SATAC is introduced by microprojectile bombardment.

114. (New) The method of claim 92, wherein the satellite artificial chromosome is a plant satellite artificial chromosome.

115. (New) The method of claim 114, wherein the plant satellite artificial chromosome is produced by a method comprising:

introducing one or more DNA fragments into a plant cell, wherein the DNA fragment or fragments comprise a selectable marker,

growing the cell under selective conditions to produce cells that have incorporated the DNA fragment into their genomic DNA,

selecting a cell that comprises a plant satellite artificial chromosome.

116. (New) The method of claim 115, wherein a DNA fragment comprises a sequence of nucleotides that targets the fragment to a heterochromatic region of a chromosome.

117. (New) The method of claim 114, wherein the satellite artificial chromosome comprises heterologous DNA.

118. (New) The method of claim 117, wherein the heterologous DNA encodes a gene product.

119. (New) The method of claim 118, wherein the gene product confers disease resistance to the transgenic plant.

120. (New) The method of claim 114, wherein the plant cell is selected from a monocot, a dicot and an algae.

121. (New) The method of claim 114, wherein the plant cell is selected from tobacco, tomato, potato, petunia, wheat, rice, maize, rye, cotton, soybean, *Brassica napus* and lettuce.

122. (New) The method of claim 114, wherein the satellite artificial chromosome is introduced by direct DNA transfer.

123. (New) The method of claim 114, wherein the satellite artificial chromosome is introduced by cell fusion.

124. (New) The method of claim 114, wherein the satellite artificial chromosome is introduced by lipid-mediated transfection by a carrier system.

125. (New) The method of claim 114, wherein the satellite artificial chromosome is introduced by microinjection.

126. (New) The method of claim 114, wherein the satellite artificial chromosome is introduced by microcell fusion.

127. (New) The method of claim 114, wherein the satellite artificial chromosome is introduced by electroporation.

128. (New) The method of claim 114, wherein the satellite artificial chromosome is introduced by microprojectile bombardment.